NEW SPECIES AND COMBINATIONS IN AGERATINA FROM NORTHCENTRAL MEXICO

B. L. Turner

Department of Botany, University of Texas, Austin, TX 78713

In connection with a treatment of the Asteraceae of Mexico (Turner & Nesom, in prep.) the following novelties, new combinations and nomenclatural comments seem appropriate.

AGERATINA SELERI B. L. Turner, sp. nov.

A. liebmannii affinis sed corollis roseis foliis erectis vel ascendentibus et pappo setis persistentibus numerodioribus differt.

Much-branched, broad shrublet to 1 m high. Stems terete, tan, brittle, puberulo-hirsute. Leaves opposite, or opposite below and alternate above, the upper branches sometimes alternate throughout; petioles absent or nearly so, the blades thickened, mostly oblanceolate to elliptic-oblanceolate, borne erect or ascending on the stem, bicolored, the upper surface green and rugulose the lower surfaces whitish with a loose or densely matted tomentum which covers a multitude of amber-colored atomiferous glands, the margins crenulate. Heads rather densely clustered in terminal rounded corymbs, the individual units 3-4 cm across, 2-5 cm high. Involucre campanulate, 2-3 seriate, eximbricate; bracts lanceolate to linear-lanceolate, 3-5 mm long, 1.0-1.5 mm wide, densely puberulent: Receptacle plane, somewhat alveolate, ca 1.5 mm across. Florets 9-20, much exceeding the involucre; corollas decidedly pink to pink-lavender, 5-6 mm long, glabrous, the tube ca 2 mm long, the lobes atomiferous-glandular, ca 0.5 mm long. Anthers ca 2 mm long. Style branches abundantly atomiferous glandular along the length of its abaxial surface, this seemingly causing the branches to adhere retarding their early separation. Achenes ca 3 mm long, moderately hispid; pappus 1-2 seriate of 30-40 flattened, ciliate, bristles 4-5 mm long, often purplish-flecked below.

TYPE: MEXICO. OAXACA: S slopes of Sierra San Felipe, overlooking Diax Ordaz, ca 17 km NE of Tlacolula, ca 2200 m, 12 Nov 1970, A. Cronquist & J. Fay 10905 (holotype TEX; isotypes GH, NY).

Additional collections examined: MEXICO. OAXACA: ca 20 mi NE of Oaxaca, ca 8000 ft, 6 Dec 1967, Gentry 22520 (A); "oberhalb Tillansongo", 4 Dec 1898, Ed Seler 1450 (GH).

Ageratina seleri is obviously very closely related to A. liebmannii (Sch.-Bip. ex Klatt) King & H. Rob., but is readily distinguished by its dark pink corollas and bicolored pappus, erect or ascending leaves and achenes with 40-60 rather persistent pappus bristles (vs. 20-40 fragile bristles in A. liebmannii). Both taxa occur in the same general region of Oaxaca, A. liebmannii at somewhat lower drier sites about Sierra de San Felipe (1100-1950 m) while A. seleri occurs at higher elevations (2000-2400 m) which is described as "open Chaparral-scrub" on the type sheet, while the Gentry collection (cited above) notes the habitat as oak woodland. They do not

appear to occur together however, at least from my examination of material of both species at A, GH, LL, TEX and US.

The holotype of Ageratina seleri has mounted upon it 3 separate shoots, two of which have leaves which are strictly opposite, but the remaining has leaves opposite below and strongly alternate above. The additional specimens cited above show the leaves as alternate.

The species is named for its first collector Edward Seler (1849-1922, cf. McVaugh, 1972), who obtained material in 1898 from some unrecognized locality in Oaxaca (cited above).

AGERATINA VERNICOSA (Sch.-Bip. ex Greenm.) King & H. Rob., Phytologia 19: 227. 1970.

Unfortunately I have given the superfluous name, Ageratina hintoniorum B. Turner (1984; MICHOACAN: Zitacuaro-Cacique, 3350 m, Hinton 13498; holotype TEX, isotype GH) to this taxon. Examination of type material at GH (lectotype here selected: MEXICO STATE: Mt Ixtaccihuatl, 3350-3650 m, 1903, C. A. Purpus 180) and UC show my error. A collection of A. vernicosa from the state of Hidalgo has also been noted (road from Real del Monte to El Chico, ca 3000 m, on rock crests, 1 Aug 1948, Moore et al. 4242, GH).

AGERATINA OPPOSITIFOLIA (A. Gray) B. L. Turner, comb. nov. - based upon Bigelovia oppositifolia A. Gray, Proc. Amer. Acad. Arts 15: 32. 1880.

In his description of Eupatorium vernicosum (noted above) Greenman related the latter to E. mygindaefolium B. Rob., E. chapalense Wats. and E. campylocladium A. Gray, observations with which I concur. Eupatorium mygindaefolium, however, as noted by both Robinson (1904) and Hall (1928) is predated by Bigelovia oppositifolia A. Gray (1880 vs. 1881).

AGERATINA ASTELLERA (B. L. Turner) B. L. Turner, comb. nov., - based upon Eupatorium astellerum B. L. Turner, Wrightia 5: 353. 1977.

King and Robinson (1981) felt that A. astellera was synonymous with A. miquihuana (B. L. Turner) King & H. Rob. I naturally disagree and take opportunity to make the appropriate transfer here. Distinctions between the two are noted below.

Ageratina campylocladia, A. oppositifolia and A. vernicosa, along with the recently described A. astellera and A. miquihuana, are closely related taxa and presumably relate to A. viburnoides, a more mesic species endemic to the immediate region of Monterrey, Nuevo Leon. These taxa are readily identified (with age) by their short persistent petiolar bases, relatively few large heads and usually vernicose leaves. A key to this group of species is provided below.

1. Leaves thick and leathery, not at all vernicose; blades elliptic to oval, 4-10 cm long ..... A. viburnoides

1. Leaves thick and shiney, vernicose; blades ovate, flabellate to deltoid, mostly 1-3 cm long (2).
   2. Heads few per flowering stem, borne singly on ultimate peduncles 2-4 cm long ..... A. vernicosa
   2. Heads 5-100 per flowering stem, borne in terminal or axillary, usually congested corymbs on ultimate peduncles mostly 1-2 cm long [3].

3. Heads numerous in leafy, terminal and axillary corymbose clusters; leaf blades deltoid or broadly ovate, widest at or near the base; heads 1.0-1.5 cm high ..... A. campylocladia
3. Heads relatively few in terminal corymbs; leaf blades ovate, obovate or flabellate, widest at or near the middle; heads 0.8-1.2 cm high (4).

   4. Achenes hispid, not glandular; leaf blades ovate, the apices acute ..... A. oppositifolia
   4. Achenes glandular; leaf blades flabellate or obovate, the apices rounded (5).

5. Leaf blades flabellate, the margins rather evenly coarsely crenate or dentate; involucres 6-8 mm high, the bracts w/o scarious margins; Zacatecas ..... A. astellera
5. Leaf blades mostly obovate, the margins closely denticulate only at or along the rounded apices; involucres 8-9 mm long, the inner bracts scarious, Tamaulipas ..... A. miquihuana

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